The profitability of the Irish tobacco market and the benefits of a new levy on tobacco company profits

By

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Executive Summary

Using available financial information, this report develops a series of profit estimates for the firms operating in the Irish tobacco market which show they are significantly more profitable than other European consumer staple companies. Between 2010 and 2012 the industry is found to have earned more than €110m annually in profits, and it could quite conceivable have been as high as €150m. Such profits give the large transnational tobacco companies the financial means and a concomitant strong incentive to fight any public health measures that might disrupt the continuation of the tobacco market in its current form. An attractive policy response identified would be for the Irish government to implement a special tobacco levy that is imposed on each company as a proportion of the profits they generate in the Irish market. Such a levy imposed at a rate of 25% would have raised between €27m and €38m annually in each of the years studies. Such revenue could be used to address tobacco related harm, such as funding cessation services, but would also start to address the massive level of profit being earned at the expense of Irish consumers. Furthermore, such a levy could also help facilitate a longer term move towards the direct regulation of tobacco prices which would be even more beneficial. To allow for this future policy possibility, the forthcoming review of the EU Tobacco Tax Directive needs to be used to make appropriate revisions. In the process of developing the estimate of industry profits, current accounting and reporting practices are also identified as being worthy of examination and reform.

Key words: Tobacco, Ireland, Profitability, Tobacco Levy.

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Introduction

Tobacco is an addictive product that inflicts death and disease upon society. It is estimated, for example, that current smokers die on average 10 years earlier than non-smokers (Banks *et al.,* 2015), that 21.13% of male deaths in Ireland in 2010 were a direct result of smoking (Tobacco Atlas, 2015), and for every death caused by smoking approximately 20 smokers are living with a smoking-related disease (Surgeon General, 2010). Furthermore tobacco use creates massive financial costs to society. It is estimated for instance, that in the USA the average cost of smoking (including both direct medical costs and lost productivity due to premature death and illness), was US$289bn each year between 2009 and 2012 (Tobacco Atlas, 2015, p.76). Kellner *et al.* (2015) offer great detail on the human and financial costs of smoking in England, including estimates for 2013/14 that show that the costs of smoking were approximately one and a half times the amount paid in tobacco duties. All of this misery and the associated costs are inflicted upon society by tobacco manufacturing companies (henceforth tobacco companies) that generate incredible profits. For instance, the profits of the world's six largest tobacco companies was US$44.1bn in 2013 "which is the equivalent of the combined profits of The Coca-Cola Company, Walt Disney, General Mills, FedEx, AT&T, Google, McDonald's and Starbucks in the same year" (The Tobacco Atlas, 2015. P.48). Branston and Gilmore (2014, 2015) explore tobacco profitability in the UK market and find that in the period since 2009, tobacco companies have made profits in excess of £1bn each year and these are increasing despite declining sales. Furthermore, within this market companies report earning operating profits with a margin of up to 68%, meaning that for every £1 the company receives having paid all its tobacco duties and sales taxes, the company earns 68p in operating profit. This margin compares to other European

consumer staple companies that earn equivalent margins that are generally in the region of 12% to 20%. Such massive profits are earned despite the high levels of duty and sales tax applied to tobacco in most markets, because the manufacturing companies are able to pass these taxes on to addicted consumer in the form of higher retail prices.

It has previously been suggested that one way of addressing this extreme profitability (and the negative health outcomes it engenders) is to subject the industry to public utility style price regulation (Gilmore et al., 2010; Branston, 2013). Such a policy would generate numerous health benefits by addressing the excessively strong profit incentive and would also allow government to capture the majority of the industries profits in the form of higher sales taxes but without affecting the price that consumers pay in the shops. Unfortunately, legal opinion has since suggested this would be problematic to implement given current EU free-market rules and in particular, the current version of the Tobacco Tax Directive. However, since the latter is up for review shortly, there is the possibility of governments lobbying for appropriate changes to be made to allow for the introduction of such price caps. But such efforts will take time and even if successful, would take even more time to implement. As such more immediate measures are needed in order to hold the industry to account for the sale of such deadly products from which their shareholders make such high returns.

One possible idea gaining prominence in this area is a special tobacco levy to be applied to tobacco companies where the funds raised are hypothecated to pay for tobacco related activities such as smoking cessation services or health care. Hungary, for example, imposed such a special health care 'contribution fee' in 2015 in order to help pay for state-funded healthcare[1] (Portfolio.Hu, 2015) whilst the US implanted a tobacco industry 'user fee' as part of the Family Smoking Prevention and Tobacco Control Act of 2009 (FDA, 2009). Similarly, there is a strong campaign to introduce a similar fee based levy in the UK following formal government consultations on its introduction in late 2014 and early 2015 (see for instance, Kellner *et al*., 2015).

Branston and Gilmore (2015) review the merits of such new tobacco levies and conclude that whilst all such measured are to be welcomed, revenue or fee based levies suffer from being paid on sales volumes (e.g. a sum paid per cigarette stick or stick equivalent sold), meaning that the companies will in all likelihood pass the costs onto the end consumer in the same way they have done with existing sales taxes. Levies of this type will therefore generate revenue for smoking related activities but will do little to address industry profitability. Therefore, a better approach would be to introduce a profit based levy where all tobacco companies involved in the Irish market have to pay a certain proportion of their operating profits into a special tobacco fund. This approach would still raise considerable

[1] The European Commission is said to be investigating the details of this levy because the progressive nature of fee doesn't treat all firms equally and hence is likely to breach the EU's definition of equal competition. The issue is not the imposition of a health levy per se but just the differential rates enacted in this case.

revenue (which could still be hypothecated) but would do so in a way that starts to address extreme company profits, thereby truly compensating society for the massive harm caused by the products produced. Since it would be the shareholders of the massively profitable tobacco companies who end up paying the levy, not addicted consumers, such a levy is consistent with the generally accepted principle that the polluter should pay. Furthermore, the introduction of such a profit based levy would be complimentary to existing tobacco control policy since it would not in any way disrupt or interfere with current practice of setting of high tobacco duties. It also has the advantage of starting the process of restricting company profitability, thereby facilitating the introducing of utility style price regulation in the future.

The aim of this report is therefore to explore the possibility of implementing a profit based tobacco levy in the Irish tobacco market. The remainder of the report is therefore set out as follows. Section A of the report develops detailed estimates of the current profitability of the Irish tobacco market by drawing upon the methodology developed by Branston and Gilmore (2013, 2015). This starts by considering company market shares and then uses these alongside profit estimates for each company to estimate profitability for the entire market. Section B then uses these profit estimates to explore the sums that could be raised by a profit levy on tobacco companies operating in the Irish market. Finally section C presents the overall conclusions and policy recommendations.

A. Tobacco industry profitability in the Irish market

Since profit data for the Irish sales of the transnational tobacco companies (TTC) isn't publically available for all firms, the starting point for estimating the profitability of tobacco companies in Ireland is a breakdown of the market by company market share.

1. Market Share

Market share data for all legal sales was obtained for each tobacco product type (cigarettes, RYO tobacco, pipe tobacco, cigar and Cigarillos) from the Euromonitor passport service. Euromonitor is an international market intelligence company whose business relies on providing accurate market data to clients. Furthermore, since this particular data was generated using official statistics, trade associations, trade press, company research, store checks, trade interviews, and trade sources, it seems reasonable to conclude that the data was provided by a credible and valid source. The market share data obtained is reported in tables 1a to 1e below.

Table 1a: Company Market Share (% by volume) in the Irish cigarette Market

	2009	2010	2011	2012	2013
JTI	48.3	47.7	48.5	50.8	51.4
Imperial	36.0	33.5	31.8	22.2	21.8
BAT	11.7	11.1	10.6	11.0	11.9
Others [α]	4.0	7.7	9.1	16.0	14.9

Source: Euromonitor

[α] others covers remainder of the market but does not include illicit sales

Table 1b: Company Market Share (% by volume) in the Irish cigar Market

	2009	2010	2011	2012	2013
JTI	51.2	51.9	51.1	50	48
Imperial	32.3	34.6	36	6.1	6
BAT	0.9	0.8	0.5	0.5	0.4
Ampersand	6.4	6.4	6.5	6.7	6.9
Hunters & Frankau Ltd	0.6	0.7	0.9	1.1	1.3
Others [α]	8.6	5.7	5	35.6	37.4

Source: Euromonitor

[α] others covers remainder of the market but does not include illicit sales

Table 1c: Company Market Share (% by volume) in the Irish Cigarillos Market

	2009	2010	2011	2012	2013
JTI	0	0	0	0	0
Imperial	91.6	91.8	92.1	92.9	92.4
BAT	0	0	0	0	0
Amerpsand	5.5	5.3	5.2	4.1	3.9
Others [α]	2.9	2.9	2.7	3	3.7

Source: Euromonitor

[α] others covers remainder of the market but does not include illicit sales

Table 1d: Company Market Share (% by volume) in the Irish RYO tobacco Market

	2009	2010	2011	2012	2013
JTI	19.6	19.8	20.3	23.6	29.9
Imperial	59.4	55.7	41.8	41.5	35
BAT	8.8	7.5	8.6	13.4	16.9
Others [α]	12.2	17	29.3	21.5	18.2

Source: Euromonitor

[α] others covers remainder of the market but does not include illicit sales

Table 1e: Company Market Share (% by volume) in the Irish pipe tobacco Market

	2009	2010	2011	2012	2013
JTI	66.6	70.8	70.9	73.7	76.4
Imperial	9.6	0	0	0	0
BAT	6.3	6.6	6.6	7	7.4
Others [α]	17.5	22.6	22.5	19.3	16.2

Source: Euromonitor

[α] others covers remainder of the market but does not include illicit sales

In order to estimate company market share for the overall tobacco market, these individual product market shares need to be weighted by the respective tobacco products' share of the value of the total Irish tobacco market. The tobacco product type share of the total market is given in table 1d below.

Table 1f: Product Market Share (by value) of the Irish Tobacco Market (€ million)

	2009	2010	2011	2012	2013
Cigarettes	1,849.80	1,725.10	1,807.50	1,724.80	1,649.90
RYO Tobacco	59.3	77.2	86.6	92.1	95
Pipe Tobacco	6.9	6.5	6.2	6	5.6
Cigars	26.6	25.7	26.6	26.3	26.2
Cigarillos	3.3	3.4	3.6	4.2	4.2
Total	1,945.90	1,837.90	1,930.50	1,853.40	1,780.90

Source: Euromonitor

What is striking from this data is the general decline in value of cigarette sales and the parallel rise in the value of RYO tobacco. Whilst a detailed consideration of these trends falls outside the scope of this report, it is likely to be related to the relative prices of these two types of product and the emerging trend of downtrading to cheaper products and/or brands which has been observed in a number of markets. For the purposes herein, the information in table 1f tells us that in 2013, for example, cigarettes represented 92.66% of the overall Irish tobacco market value (€1,649.90m/€1,780.90m), and hence that the company market shares for cigarettes should be given a 92.66% weighting when calculating the overall company market shares for the entire Irish tobacco market. Similarly in 2013 RYO tobacco should be weighted at 5%, Pipe Tobacco at 0.3%, Cigars at 1.5%, and Cigarillos at 0.2%. Similar calculations are done for the other years.

Combining such weightings with the company market shares for the different products allow the estimation of the individual company market share for the entire tobacco market, and this information is presented in table 1g below.

Table 1g: Company Market Shares in the total Irish tobacco market

	2009	2010	2011	2012	2013
JTI	47.4	46.6	47.3	49.4	50.2
Imperial	36.7	34.4	32.3	23.0	22.4
BAT	11.4	10.8	10.3	10.9	12.0
Others	4.5	8.2	10.1	16.7	15.5

Source: Authors calculation using data presented in tables 1a - 1f above.

What the figures show is that JTI has expanded slightly its share of the overall Irish market, whilst BAT has remained reasonably consistent. Imperial has witnessed a significant decline in market share, especially in the most recent years, with the majority of this being accounted for by a concomitant rise in the 'others' category, and to a lesser extent the increased share of JTI. This trend mirrors the findings of Branston and Gilmore (2015) which found that Imperial also experienced a decline in UK market share at the same time. It isn't exactly clear what has caused this changing trend for Imperial, but in Ireland it seems to be driven by changes in the cigarette and RYO segments of the market, both substantial parts of the overall tobacco market in which Imperial has lost significant market share to others. The reasons behind this change are unclear.

2. Industry profitability and accounting issues

The market share breakdown developed above now needs to be utilised alongside profit data for each of the major market participants in order to estimate the total profitability of the entire industry. Each of these four major market shares is thus considered in turn (sections 3 to 6 below) in order to build-up an industry wide picture of profitability. Where actual data is available it is reported, but where it is not, estimates are calculated using the methods detailed below which are consistent with and build upon those developed for estimating UK profitability in Branston and Gilmore (2013) and then refined in Branston and Gilmore (2015). As with Branston and Gilmore (2015) a number of different scenarios are developed in order to explore the sensitivity of the results to the assumptions taken and to give a range of possible results in order to reflect the uncertainty in the calculations. These different scenarios are then used to calculate overall industry profitability in section 7 and then validated in section 8.

One particular issue encountered, and which applies to all firms to a greater or lesser extent, is that accounting practices make the identification of the true level of profits a challenge. First of all, not all of the transnational companies have Irish registered subsidiaries that conduct their Irish operations and hence whose accounts can be used as a record of their revenue and profitability generated in Ireland. Secondly, even when data is currently available, it isn't clear the extent to which it is a true reflection of actual profitability in Ireland. As Branston and Gilmore (2015) identified when considering the UK

tobacco market, accounting practices allow TTC to generate profit in one country but report at least some of these profits in a different country via the use of a number of different subsidiary companies. Furthermore, such accounting practices can change over time, making the situation further opaque. Branston and Gilmore (2105) cite the example of the JTI subsidiary in the UK, which reported a significant reduction in profitability between two years simply because of the transfer of intellectual property rights to another JTI subsidiary. Such accounting changes don't fundamentally change the profits generated by JTI in the UK but they made identifying it significantly more difficult.

Such issues should be far less problematic for government since they already require all companies to present profit information for corporation tax purposes. However, in light of the issues highlighted above government should also consider requiring all firms to file more detailed company accounts which cover their entire activities in any given country, even if profits generated in one market ultimately accrue to one or more subsidiary based overseas. One way to do this would be require detailed reports of transactions conducted with other companies belonging to the same parent group. This would be a change from current practice but would allow TTC to be more easily held to account where they are actually generating profits. At the very least current rules should be strictly and clearly enforced. When the accounts for the Irish subsidiary of JTI were sought for this report, it was discovered that the 2013 financial year accounts were not available because the company made a mistake in their original submission to the Companies Registration Office (CRO). The entire accounts were returned to JTI in February 2015, with the requirement that a corrected version be returned within 14 days. As of June 2015 no such accounts were available from the CRO and it isn't clear, what, if any, penalty with be applied for this delay. In light of this account filing delay, this report will only consider the 2010, 2011 and 2012 financial years.

3. British American Tobacco

BAT operates in Ireland via its local subsidiary, P.J. Carroll & Company Ltd, and this company files an annual return each year, meaning its reported profits are a matter of public record as detailed in Table 2a below.

Table 2a: The profitability of BAT in Ireland

	2010	2011	2012
Net Revenue (€)	35,525,000	34,538,000	33,176,000
Operating profit (€)	9,383,000	9,003,000	8,123,000
Profit Margin	0.2641	0.2607	0.2448

Source: P.J. Carroll & Company (2011, 2012, 2013, 2014) and author's calculation thereon.

The table shows that significant profits are made by BAT's Irish subsidiary. In 2012 for example, P.J. Carroll made more than €8m in profit on sales (after taxes and duty were paid) of €33m, which represented a profit margin of more than 24%. By way of a comparison, Branston and Gilmore (2013) report that European firms in comparable consumer staple industries typically made a profit margin in the range of 12-20%. However, whilst significant in comparison to other industries, this rate of profit is considerably lower than the rate of profits estimated for the majority of the UK tobacco market in Branston and Gilmore (2015) and the estimates herein for the other participants in the Irish market as covered in the sections below. Since prices between companies operating in Ireland are reasonably consistent in particular price categories and tobacco products cost relatively little to actually manufacture, it seems reasonable to think that company profit margins within Ireland would be fairly consistent between the major firms, since only brand portfolios and economies of scale stand as key differences. This suggests that the accounting practices employed by P.J. Carroll might be under-reporting the profits earned in Ireland by BAT, as for instance, other BAT subsidiaries might be reporting some of the profits generated in the Irish market. As such we can consider the profitability reported by the BAT group as a whole as this should include all subsidiary companies. The group does not provide market specific information but includes Ireland within its 'Western Europe' market area, alongside other (mainly) EU countries. The performance of this region is detailed in table 2b below.

Table 2b: The profitability of BAT in their Western Europe Region

	2010	**2011**	**2012**
Net Revenue (£ Million)	3,419	3,600	3,442
Adjusted Profit (£ Million)	1,054	1,228	1,186
Profit Margin	0.3083	0.3411	0.3446

Source: BAT (2012, 2013, 2014) and author's calculation thereon

The profit rate reported for Western Europe is slightly above that reported by P.J. Carroll. This suggests that either Ireland is simply less profitable than other European markets, or that there are indeed accounting practices employed which give a misleadingly low impression of profit levels in Ireland. It is doubtful that Ireland has poor levels of tobacco profitability relative to other markets given that it has some of the highest tobacco prices in Europe (see ITMAC, 2015) and other markets with high prices, such as the UK, have very high reported profit rates (see Branston and Gilmore, 2013, 2015). However, in order to allow for both possibilities, two scenarios for the profitability of BAT in Ireland are therefore developed. The 'low' scenario uses the reported level of profitability (as detailed in table 2a), whilst the 'high' scenario uses the reported level of revenues for the Irish operations but with the profit margin reported for the Western Europe region (table 2b). The profitability for BAT in Ireland is therefore presented in table 2c below.

Table 2c: Calculated Profitability of BAT in Ireland

	2010	2011	2012
Net Revenue (€)	35,525,000	34,538,000	33,176,000
Low Scenario profits (€)	9,383,000	9,003,000	8,123,000
Low Scenario profit margin	0.2641	0.2607	0.2448
High Scenario profits (€)	10,952,358	11,780,912	11,432,450
High Scenario profit margin	0.3083	0.3411	0.3446

Source: authors own calculation using the information from tables 2a and 2b above.

4. Japan Tobacco International

JTI has the largest market share in Ireland and operates in this market using the JTI Ireland Ltd subsidiary, which files an annual return each year. Whilst these accounts do state the profit made in Ireland, they unfortunately do not separate the duty and other taxes paid from the other cost of sales which makes calculating a profit margin problematic. To address this, an estimate of the duty and taxes paid needs to be made using the limited data that is available. The Irish accounts for BAT's Irish subsidiary do identify the different elements of total revenue and so we use this to estimate the equivalent figures for JTI. We assume that the same proportion of taxes out of total revenue also applies to JTI in that year. For example, in 2012 BAT had total revenue of €253,486,000 of which €220,310,000 was duty and other taxes, meaning only 15.05% was net revenue (i.e. money the firm received after paying sales taxes). Therefore it is assumed that 15.05% of JTI Irelands total revenue was also its net revenue for that year. Using this method, table 3a below shows the profitability of JTI in Ireland.

Table 3a: The profitability of JTI in Ireland

	2010	2011	2012
Net Revenue (€)	115,440,477	112,184,988	100,209,109
Adjusted Operating profit (€)	65,308,000	62,280,000	59,685,000
Profit Margin	0.5657	0.5552	0.5956

Source: JTI Ireland Ltd (2012, 2013, 2014) and author's calculation thereon.

5. Imperial Tobacco

Imperial Tobacco operates in Ireland via its John Player & Sons Ltd subsidiary, which also distributes PMI brands such as Marlboro. Unfortunately no detailed accounts for this subsidiary are available as they just refer to the accounts of the UK based parent company. The Imperials group accounts do provide details of the revenue and profit earned in the 'rest of the EU' market which is the EU minus the specific markets of the UK, Germany and Spain (which are reported separately). This information is presented in table 3a below.

Table 3a: The profitability of Imperial of the EU minus the UK, Germany and Spain

	2010	2011	2012
Net Revenue (£ Million)	1,521	1,592	1,534
Adjusted Operating Profit(£ Million)	658	638	626
Profit Margin	0.4326	0.4008	0.4081

Source: Imperial (2012, 2013, 2014).

In the absence of more accurate information our low scenario assumes that overall profitability for the rest of the EU applies to their Irish operations. However, the profitability of JTI in Ireland suggests these might well be under estimates and so our high scenario assumes Imperial made the same profit margins as JTI in each year. In order to calculate these two scenarios the assumed rate of profitability needs to be applied to estimates of net revenues in order to calculate the amount of profit actually made. The only realistic way of estimating these is to use the reported net revenues of BAT in Ireland adjusted for company market share. For instance, in 2012 BAT had revenues of €33,176,000 and a market share of 10.9% meaning each 1% of market share was worth €3,034,652. Since Imperial had an overall market share of 23% in 2012 we can estimate its net revenue for that year as being €98,070,185. Applying this approach generates the estimates of Imperial's profitability in Ireland as outlined in table 3b.

Table 3b: The profitability of Imperial in Ireland

	2010	2011	2012
Net Revenue (€)	120,953,113	115,045,079	98,070,185
Low Scenario Operating Profit(€)	52,325,542	46,104,749	40,020,819
Low Scenario Profit Margin	0.4326	0.4008	0.4081
High Scenario Operating Profit (€)	68,426,657	63,867,792	58,411,048
High Scenario Profit Margin	0.5657	0.5552	0.5956

Source: authors own calculations.

6. Others

The remainder of the Irish tobacco market, which we have labelled as 'others', is more difficult to estimate because by definition it includes all other companies that operate in the legal market which are likely to be quite varied in nature and hence have a variety of profit rates. It does not include any illicit sales of any kind. In order to account for this we again utilise our two scenarios. In our low scenario we therefore assume that the remainder of the market is half as profitable as the Irish subsidiary of BAT in each year. BAT is at the low end of the reported profitability we have examined thus far, and by using half the Irish reported rate we allow for the fact that some parts of the market might generate low profits, whilst other parts are highly profitable. In our high scenario we simply assume the market is as profitable as the Irish BAT subsidiary since this has a profit margin that is lower

than for the other main participants and hence already allows for the fact that some parts of the others group might be very profitable whilst other make little profit. The methodology for calculating these profit estimates is the same as that employed for Imperial Tobacco above. The assumed profit margins are applied to estimates of net revenue which are derived from BAT's reported revenues adjusted by market share. The estimates are detailed in Table 6 below.

Table 6: Estimated Profitability of the others part of the Irish Market

	2010	2011	2012
Net Revenue	27,098,850	33,715,895	50,534,951
Low scenario (£ million)	7,157,453	8,788,702	12,373,264
High scenario (£ million)	3,578,726	4,394,351	6,186,632

Source: authors own calculations.

7. Overall Profitability of the Tobacco market

Combining all the profit estimates for the individual market shares generates estimates for the entire Irish market. In keeping with the estimates of the profitability of particular companies, we construct low and high estimates for the entire market. These utilise the low and high scenarios where they exist for particular market shares and the single profit estimate where they do not. The estimates for the overall market are presented in table 7.

Table 7: Estimated Profitability of the Irish Tobacco Market

	2010	2011	2012
Low scenario (€)	130,595,268	121,782,100	114,015,451
High scenario (€)	151,844,467	146,717,406	141,901,761

Source: authors own calculations.

The results show that that the Irish tobacco market is very profitable, generating corporate profits in excessive of €110m under both scenarios in all years considered. If the high scenario is taken as a guide, then it suggests that profitability was in excess of €140m in all years. However, it is noteworthy that these profits have been declining year-on-year, and this is in contrast to the estimates for the UK developed in Branston and Gilmore (2015) which show a continual trend of increasing profitability for the same period. Whilst both markets show declining smoking rates during this period, the Irish economy was more badly affected by the financial crisis and austerity measures given the conditions of the IMF/EU financial bailout package which most likely impacted upon the firms pricing power (and hence profitability) during this time.

8. Confirming the estimates using current corporation tax paid

One way of confirming the veracity of the profit estimate presented above is to consider the amount of corporation tax paid by the tobacco companies operating in Ireland. Irish corporation tax is paid by each Irish registered company at the rate of 12.5% on its reported profits, so can be used to deduce the level of profits on which it was paid and hence the profitability of the market as a whole. Such estimates will be indicative only since the measure of profits on which the tax is paid is different to the adjusted operating profit measure considered above. The version of profit used for corporation tax purposes allows firms to take some deduction and other charges which reduce it relative to operating profit, and the tax actually paid is further complicated by deferred tax liabilities and other adjustments relating to previous years. In light of these issues, profit estimates based on this approach should give estimates that are slightly lower than, but broadly in line with, the profit estimates developed using the methodology reported in sections 2 to 7 above. We would also expect these corporation tax based estimates to be more variable from year to year given the effects of deferred liability and other adjustments made between years.

Unfortunately tax records are not in the public domain, so our tax based estimates herein have to be based on the incomplete corporate tax information that is available in company annual accounts. No such issue would be faced by government since by definition they would have access to full tax records of all companies.

Within their Irish subsidiary company accounts, BAT and JTI highlight the corporation tax each paid on their Irish operations. Table 8a reports this information, and also uses it to extrapolate the tax the entire tobacco sector would have paid. For example, in 2012 BAT and JTI combined paid about €8m in corporate taxes and these companies collectively accounted for 60% of the market in that year. Therefore we can estimate that if the other firms paid tax at the same rate then the sector as a whole would have paid €13.3m in corporate taxes.

Table 8a: Estimated Corporation tax paid by the total Irish Tobacco Market based on the reported tax paid by BAT and JTI

	2010	2011	2012
BAT Corporate tax paid (€)	1,341,000	1,121,000	986,000
JTI Corporate tax paid (€)	7,737,000	8,899,000	7,059,000
Combined Total (€)	9,078,000	10,020,000	8,045,000
JTI and BAT market share	0.5734	0.5759	0.6033
100% market equivalent (€)	15,829,515	17,398,611	13,335,341

Source: : P.J. Carroll & Company (2011,2012, 2013, 2014), JTI Ireland Ltd (2012, 2013) and author's own calculations

These estimates of the total amount of corporate tax paid by the Irish tobacco industry can then be used to calculate the level of profits made by the entire industry. Such estimates are presented in table 8b below which also reports the high and low scenario estimates derived earlier by way of a comparison. For example, in 2012 it is estimated that corporate taxes of €13.3m would have been paid by the industry, and since this tax was paid at 12.5% it suggests that the industry therefore made profits of €106.6m.

Table 8b: Estimated Irish Tobacco Market profitability

	2010	2011	2012
Corporate tax paid by the Tobacco market (€)	15,829,515	17,398,611	13,335,341
Corporate tax rate	0.125	0.125	0.125
Tax derived profit estimate (€)	126,636,121	139,188,885	106,682,724
Low scenario industry profits (€)	130,595,268	121,782,100	114,015,451
High scenario industry profits (€)	151,844,467	146,717,406	141,901,761

Source: authors own calculations and information from tables 7 and 8a

Comparing the different estimates in table 8b, we can see that both methods of estimating industry profits are reasonably consistent with each other. In 2010 and 2012 we can see that the estimates using the tax actually paid methodology are slightly below the low scenario estimated profits, but in 2011 the tax derived estimate is actually above the low scenario and is in fact closer to the high scenario. As identified earlier, such a pattern is what we would expect to see because corporation tax is not paid on adjusted operating profits exactly but a more lenient definition of profits that allows firms to deduct various expenses, such as a capital allowance in excess of depreciation, and there are adjustments referring to past years. The very fact that such estimates are broadly in line with our earlier estimates suggests we can regard our calculated low and high scenario estimates as being reasonable.

B. The benefits of a Profit based Tobacco Levy

Such extreme rates of profitability, far higher than other consumer staple products, gives the tobacco industry a strong incentive and the financial means to fight any and all measures that might disrupt the tobacco market, including government measures designed to protect the public health. One attractive option for policy makers, especially in the context of the Government's commitment to be tobacco-free by 2025 (Government of Ireland, 2013), might therefore be to consider the imposition of a special tobacco levy. Other countries are already starting to implement tobacco levies where the funds are hypothecated to address the harms caused by tobacco companies. Indeed, if the funds

were hypothecated to fund smoking cessation services (as argued in Kellner *et al,* 2015) a levy would help create virtuous circle whereby past tobacco sales help current consumers quit. It would also be consistent with the generally accepted principle that the polluter pays. Branston and Gilmore (2015) consider the rationale behind such levies in some detail, including the pros and cons of both a user fee type levy which is basically a specific tax payable per cigarette stick (or stick equivalent) sold, and a profit based levy which is payable on company profits. The former is essentially just another type of tobacco duty on sales, but a levy on profits would be something totally new. It would not only raise revenue in a way that can't be passed on to the consumer (unlike current tobacco duty) but would also start to address the excessive industry profitability which is being generated alongside the imposition of massive costs upon society. Furthermore, a profit based tobacco levy could be reasonably easy to collect since profit information is already provided to tax authorities given that corporation tax has to be paid.

9. Additional Levy Revenues

Serious consideration should therefore be given to a profit based tobacco levy that applies to all tobacco firms importing or manufacturing tobacco products to supply the Irish market and as such could be clearly identified as a tobacco specific policy. The imposition of such a levy would need to be explored in more detail by appropriate government authorities that have access to more complete financial information on the industry, and in light of the political expediency of different potential rates. However, the industry profit estimates developed above show that there is clear potential for significant sums to be raised at very little cost to the nation. By way of some illustrative examples, table 9 below outlines estimates of the sort of sums that might be raised if the levy were to be applied at a rate of 10% and 25% of industry profits.

Table 9: Estimated yield from a profit based tobacco levy

	2010	2011	2012
Tax derived profit estimate (€)	126,636,121	139,188,885	106,682,724
Low scenario industry profits (€)	130,595,268	121,782,100	114,015,451
High scenario industry profits (€)	151,844,467	146,717,406	141,901,761
10% levy using tax estimate of profits	12,663,612	13,918,888	10,668,272
10% levy using low scenario profit estimate	13,059,527	12,178,210	11,401,545
10% levy using high scenario profit estimate	15,184,447	14,671,741	14,190,176
25% levy using tax estimate of profits	31,659,030	34,797,221	26,670,681
25% levy using low scenario profit estimate	32,648,817	30,445,525	28,503,863
25% levy using high scenario profit estimate	37,961,117	36,679,352	35,475,440

Source: authors own calculations

To take 2012 as an example, table 9 shows that a 10% profit levy would raise something in the region of €10.7m to €14.2m in additional revenue, whilst a 25% levy would raise between €26.7 and €35.5m. From such sums the costs of implementing such a levy would need to be deducted in order to get a true sense of the overall net revenue to be generated. However, as discussed above such costs could be expected to be very small given the means of collecting the levy are already in place.

The tobacco companies would no doubt argue they are being unfairly penalised and being singled out to pay higher profits based taxes. They would be right to say they are being singled out since the levy would be introduced because they are producing a unique product that inflicts significant amounts of misery, damage, and financial burden upon society whilst also generating a level of profitability for the industry far beyond other consumer staple products. Furthermore, depending upon what rate of implementation was decided, the Irish government could quite reasonably say that the total amount of profit based taxes and levies payable in Ireland was still low compared to other countries. As of 2015 these were, for example, 20% in the UK, 29.65% in Germany, 33.33% in France, and 40% in the USA 40% (KPMG, 2015). Such arguments and hence the ease of introducing such a levy might be further enhanced if the profit based tobacco levy were to be initially implemented at a relatively low rate, and then adjusted and increased over time. There should also be no concern about the companies leaving the market in the face of the levy as they would still want to sell tobacco into the Irish market in order to get their massive profits and to do so would require a presence in Ireland.

C. Conclusions and Policy Recommendations

Using available financial information, this report has developed a series of estimates which demonstrate that the Irish tobacco market is inordinately profitable, comfortably earning more than €100m in profits each year. Such profits give the large transnational tobacco companies the financial means and a concomitant strong incentive to fight any public health measures that might disrupt the continuation of the tobacco market in its current form. An attractive policy response to address this would be for government to implement a special tobacco levy which is imposed as a proportion of the massive profits generated in the Irish market. This would not only raise significant sums of money to address tobacco related harm, such as funding cessation services, but would also start to curtail the massive level of profit being earned at the expense of Irish consumers. Not only is this an attractive policy in its own right, but it could also help facilitate a longer term move towards the direct regulation of tobacco prices. To allow this future policy possibility, the forthcoming review of the EU Tobacco Tax Directive needs to be used to make appropriate revisions.

In light of this work we therefore make the following policy recommendations to the Irish government:

1. The government should look to implement a new profit based tobacco levy payable by all tobacco manufacturing companies supplying tobacco products into the Irish market.

2. During the forthcoming review of the tobacco tax directive, the government should lobby for revisions to allow for the implantation of utility company style price regulation of tobacco products.

3. In order to facilitate a new tobacco levy and future price regulation, and to better hold the industry to account again existing tobacco policy, the government should make sure existing accounting standards are rigorously followed so that all companies operating in Ireland file timely accounts that are a matter of public record.

4. In order to gain a better picture of industry practices and profitability, reporting requirements should be enhanced to require tobacco firms to include detailed summaries within their accounts of all transaction that take place between them and other companies which have the same parent group.

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